

ABSTRACT OF THE DISCLOSURE

A real/complex dual combination channel equalizer is provided, which is capable of minimizing the complexity of a channel equalizer while maintaining the performance of a real and complex mode. The real/complex dual combination channel equalizer includes a combination of elements for inputting real data and imaginary data to a channel select unit, outputting data selected by the channel select unit, yielding real filter output data and imaginary filter output data by multiplying tap coefficients to the outputted data and performing operations, selecting data among the yielded data, outputting a final data of the real filter by subtracting the value outputted from a real decision orientation filter unit from the selected data, outputting real/complex decision data and an error by the outputted data, and renewing the tap coefficient by the data outputted from the channel select unit and the error.